

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Amended) An improved ejector sleeve for molding a raised aperture in a molded article formed within a mold having an ejector plate and a core pin, the ejector sleeve comprising:

 a base portion located at a first end of the ejector sleeve for mounting the sleeve to the ejector plate of the mold;

 a tube portion extending from the base to a second end of the ejector sleeve, the tube having an inner surface defining a central bore for receiving the core pin and an outer surface defining the exterior of the tube;

 a lip located at a second end of the ejector sleeve for forming at least a portion of the raised aperture in the molded article; the width of the lip being defined as the distance between the inner surface and outer surface of the tube at the lip, the width of said lip being between about thirty thousandths of an inch and about less than forty thousandths of an inch.

Claim 2 (cancelled)

3. (Original) The improved ejector sleeve of claim 1 wherein the width of the lip is between about twenty thousandths of an inch and less than thirty thousandths of an inch.

4. (Amended) The improved ejector sleeve of claim 1 wherein at least a portion of the surface of the sleeve is coated with a surface coating having a thickness of less than 0.0001 of an inch of a material selected from the group consisting of nickel, chromium, alloys of nickel and alloys of chromium.

5. (Amended) The improved ejector sleeve of claim 4 wherein said coating is an alloy of nickel which further includes phosphorus and polytetrafluoroethylene.

6. (Amended) An improved ejector sleeve and core pin system for molding a raised aperture in a molded article formed within a mold having an ejector plate, the system comprising:

(1) an ejector sleeve including, (a) a base portion located at a first end of the ejector sleeve for mounting the sleeve to the ejector plate of the mold, (b) a tube portion extending from the base to a second end of the ejector sleeve, the tube having an inner surface defining a central bore and an outer surface defining the exterior of the tube, and (c) a lip located at a second end of the ejector sleeve for forming at least a portion of the raised aperture in the molded article; the width of the lip being defined as the distance between the inner surface and outer surface of the tube at the lip, the width of said lip being between about thirty thousandths of an inch and about less than less than about forty thousandths of an inch;

(2) a core pin having a first end with a head adapted to be retained in a cavity formed in the mold base and a second end dimensioned for receipt within the central bore of the ejector sleeve and having a pin tip which defines at least a portion of the raised aperture when the mold is closed; and

(3) a plug having a base with (a) a shoulder for engaging a stop surface in an core pin aperture formed in the mold, (b) a threaded exterior surface for engaging a threaded surface in the aperture formed in the mold, (c) a driving surface for engagement with a rotating driving tool to tighten the mounting plug into position, and (d) a core pin contacting surface for supporting a surface of the core pin within the core pin aperture.

7. (Original) The system of claim 6 further comprising a sleeve extension for receipt of the ejector sleeve having a first end and a second end, the first end of the sleeve extension having a base portion adapted to mount to an ejector plate, the second end of the sleeve extension having a slot for receiving the base of the ejector sleeve, and a tube portion extending between the base and slot and defining a through bore dimensioned to receive the core pin.

8. (Original) The system of claim 6 wherein the width of the lip is further defined as the difference between the external diameter and internal diameter of the tube at the lip.

9. (Original) The system of claim 6 wherein the width of the lip is less than thirty thousandths of an inch.

10. (Original) The system of claim 6 wherein at least a portion of the surface of the sleeve is coated with a coating having a thickness of less than 0.001 of an inch of a metal compound selected from the group consisting nickel, chromium, alloys of nickel and alloys of chromium.

Claims 11-20 (cancelled)

21. (Amended) A sleeve extension for receipt of ~~the~~ an ejector sleeve comprising:

a base located on a first end of the sleeve extension and being adapted to mount to a slot formed in one of an ejector plate or pin plate;

a slot located on a second end of the sleeve extension for receiving a base portion of an ejector sleeve;

and a tube portion extending between the base and slot and defining a through bore dimensioned to receive the ejector sleeve and a core pin.

22. (Original) An injection mold having an improved ejector pin retaining system comprising:

a first mold portion having surfaces defining a portion of a mold cavity; a second mold portion having surfaces defining a portion of a mold cavity, the first and second mold portions being moveable between an opened position to eject a molded article and a closed position to mold the plastic article;

an ejector plate located within one of the first and second mold portions for providing reciprocal motion in a direction opposite to the movement of the first and second mold portions, the ejector plate having an aperture formed in an exterior surface, the aperture having a stop surface, and an interior threaded portion formed therein; an ejector pin having a first end with a head adapted to be retained in an aperture formed in an exterior surface of the ejector plate and a second end including a molded article contacting surface, the article contacting surface contacts a portion of the molded article when the mold opens to assist in ejection of the molded article from the mold;

and a retaining plug for providing a floating mount including, (a) a base with a shoulder for engaging the stop surface within the aperture in the ejector plate, (b) a threaded exterior surface for engaging the threaded interior surface within the aperture formed in the ejector plate, (c) a driving surface for engagement with a rotating driving tool to tighten the mounting plug into position, and (d) an ejector pin contacting surface for supporting the surface of the ejector pin within the aperture in the ejector plate.

23. (New) An improved ejector sleeve for molding a raised aperture in a molded article formed within a mold having an ejector plate and a core pin, the ejector sleeve comprising:

a base portion located at a first end of the ejector sleeve for mounting the sleeve to the ejector plate of the mold;

a tube extending from the base to a second end of the ejector sleeve, the tube having an inner surface defining a central bore for receiving the core pin and an outer surface defining the exterior of the tube;

a lip located at a second end of the ejector sleeve for forming at least a portion of the raised aperture in the molded article; the width of the lip being defined as the distance between the inner surface and outer surface of the tube at the lip, the width of said lip being between about one thousandth of an inch and about forty thousandths of an inch; and

a thin surface coating of a metallic material applied to at least a portion of the tube, the thin surface coating providing increased lubricity to the tube for low friction reciprocal movement of the sleeve between an extended and retracted position.

24. (New) The improved ejector sleeve of claim 23 wherein said thin surface coating is a substantially uniform, lubricious coating with a thickness of less than about 0.0001 inch covering at least a portion of the tube and wherein the thin surface coating is applied prior to cutting of the lip of the sleeve of the ejector to shorten the sleeve to a desired length and deburring of the peripheral edge of the sleeve.

25. (New) The improved ejector sleeve of claim 23 in which the thickness selected for the thin surface coating such that the thin surface coating remains substantially intact at the cut and deburred lip of the sleeve after cutting and deburring thereof.

26. (New) The improved ejector sleeve of claim 23 wherein the thin surface coating has a thickness of less than 0.0001 of an inch and wherein the metallic material is selected from the group consisting of nickel, chromium, alloys of nickel and alloys of chromium.

27. (New) The improved ejector sleeve of claim 23 wherein said thin surface coating is an alloy of nickel which further includes phosphorus and polytetrafluoroethylene.

28. (New) The sleeve extension of Claim 21 wherein the slot is a T-slot formed on the second end of the sleeve extension and wherein the T-slot is dimensioned to slidably receive and retain the base portion of the ejector sleeve.